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Train-induced Forces means the vertical, longitudinal, and lateral dynamic forces which are generated during train movement and which can contribute to the buckling potential of the rail.

Track Lateral Resistance means the resistance provided by the rail/crosstie structure against lateral displacement.

Track Longitudinal Resistance means the resistance provided by the rail anchors/rail fasteners and the ballast section to the rail/crosstie structure against longitudinal displacement.

Unscheduled Detour Operation means a short-term, unscheduled operation where a track owner has no more than 14 calendar days' notice that the operation is going to occur.

[63 FR 34029, June 22, 1998; 63 FR 46102, Aug. 28, 1998; 63 FR 49382, Sept. 15, 1998; 70 FR 66297, Nov. 2, 2005; 71 FR 59691, Oct. 11, 2006]

§213.121 Rail joints.

- (a) Each rail joint, insulated joint, and compromise joint shall be of a structurally sound design and dimensions for the rail on which it is applied.
- (b) If a joint bar on Classes 3 through 5 track is cracked, broken, or because of wear allows excessive vertical movement of either rail when all bolts are tight, it shall be replaced.
- (c) If a joint bar is cracked or broken between the middle two bolt holes it shall be replaced.
- (d) In the case of conventional jointed track, each rail shall be bolted with at least two bolts at each joint in Classes 2 through 5 track, and with at least one bolt in Class 1 track.
- (e) In the case of continuous welded rail track, each rail shall be bolted with at least two bolts at each joint.
- (f) Each joint bar shall be held in position by track bolts tightened to allow the joint bar to firmly support the abutting rail ends and to allow longitudinal movement of the rail in the joint to accommodate expansion and contraction due to temperature variations. When no-slip, joint-to-rail contact exists by design, the requirements of this paragraph do not apply. Those locations when over 400 feet in length, are considered to be continuous welded rail track and shall meet all the requirements for continuous welded rail track prescribed in this part.

- (g) No rail shall have a bolt hole which is torch cut or burned in Classes 2 through 5 track. For Class 2 track, this paragraph (g) is applicable September 21, 1999.
- (h) No joint bar shall be reconfigured by torch cutting in Classes 3 through 5 track.

§213.122 Torch cut rail.

- (a) Except as a temporary repair in emergency situations no rail having a torch cut end shall be used in Classes 3 through 5 track. When a rail end is torch cut in emergency situations, train speed over that rail end shall not exceed the maximum allowable for Class 2 track. For existing torch cut rail ends in Classes 3 through 5 track the following shall apply—
- (1) Within one year of September 21, 1998, all torch cut rail ends in Class 5 track shall be removed;
- (2) Within two years of September 21, 1998, all torch cut rail ends in Class 4 track shall be removed; and
- (3) Within one year of September 21, 1998, all torch cut rail ends in Class 3 track over which regularly scheduled passenger trains operate, shall be inventoried by the track owner.
- (b) Following the expiration of the time limits specified in paragraphs (a)(1), (2), and (3) of this section, any torch cut rail end not removed from Classes 4 and 5 track, or any torch cut rail end not inventoried in Class 3 track over which regularly scheduled passenger trains operate, shall be removed within 30 days of discovery. Train speed over that rail end shall not exceed the maximum allowable for Class 2 track until removed.

§ 213.123 Tie plates.

- (a) In Classes 3 through 5 track where timber crossties are in use there shall be tie plates under the running rails on at least eight of any 10 consecutive ties.
- (b) In Classes 3 through 5 track no metal object which causes a concentrated load by solely supporting a rail shall be allowed between the base of the rail and the bearing surface of the tie plate. This paragraph (b) is applicable September 21, 1999.)